

We are excited to announce the return of our UMD A. James Clark School of Engineering, Cyber-Physical Systems Engineering, "**Jumpstart your Engineering Career**" Summer Program. Hosted by the [UMD CPSE undergraduate program](#), this five-week program runs from July 14th to August 15th. It is also conveniently located at the Universities at Shady Grove (USG) Campus in **Rockville, MD**.

The summer program is **open to all Maryland high school, community college, and 4-year university students** with basic programming skills.

This is a tremendous low-cost experience for those selected to join. **Our UMD A. James Clark School of Engineering faculty will also provide letters of recommendation to students who complete the entirety of this summer experience.** Take a look at this [CPSE video](#) detailing the "Jumpstart Your Engineering Career" Summer Program.

Please Check out UMD's Summer Program Commercial Below

<https://youtu.be/21ySsTjVbGQ>



Students who are interested, kickstart your engineering career and [APPLY HERE](#). There are 50 spots available! All teaching/material costs are waived, except for a **\$150 registration fee** (*upon acceptance into the program*).

We will cover the following topics:

- **Project Development** (*ideation, team formation, and agile development*)
- **Basic electronics** (*including components, tools, and troubleshooting*)
- **Microcontrollers and Single-Board Computers** (*Arduino, Raspberry Pi, Jetson Nano*)

- Circuits
- Soldering
- Python
- Gui Programming
- Sensor Programming and Hardware Interfacing
- IoT and CPSE Fundamentals
- Message Queue Telemetry Transport (MQTT)
- Introduction to Machine Learning and Computer Vision

Students will work on projects from ideation and team formation to rapid prototyping in a real-world, collaborative design setting, culminating in a [Demo Day showcase](#)! They will receive hands-on training and experience in electronics, sensors, microcontrollers, networks & protocols, software development, and 3D additive manufacturing.

Application Deadline: April 18th, 2025

[\[See Linked Flyer\]](#)

Program Schedule: Four days a week - Monday to Thursday from 10 AM to 4 PM - starting July 14th to August 15th (*five-week program*)

Location: The Biomedical Sciences and Engineering Building, at The Universities at Shady Grove (USG) Campus **located at 9631 Gudelsky Drive, Rockville, Maryland 20850**

This competitive program requires applicants to demonstrate a solid commitment to STEM education and an introductory understanding of programming tools like **C/C++ and/or Python**. In addition to completing the [Student Application](#), **applicants are encouraged** to have a professor, teacher, or mentor submit the [Recommendation Questionnaire](#) by **Friday, April 18th, 2025**.

We hope you check this out, contact us at es-sg@umd.edu if you have any questions!